

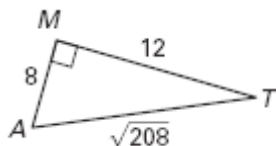
Geometry 9.5 Assignment: Trigonometric Ratios

(pp 558–566) Omit 2 & 6

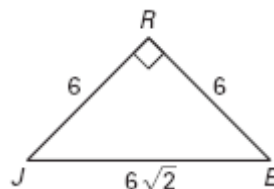
1. What is your name?

Find the sine, the cosine, and the tangent of the acute angles of the triangle. Express each answer as a fraction and as a decimal rounded to four places.

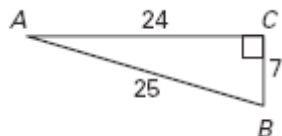
2.



3.



4.



Use a technology to approximate the given value to four decimal places.

5. $\tan 4^\circ$

6. $\sin 32^\circ$

7. $\sin 71^\circ$

8. $\cos 64^\circ$

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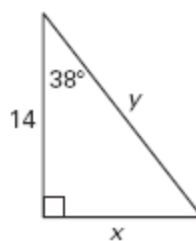
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Find the value of each variable. Round your final answer to the nearest tenth.

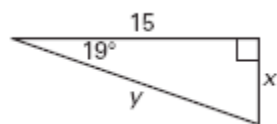
9.



10.



11.



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The following questions refer to the lighthouse pictured.

12. At 2 P.M. the shadow of a lighthouse is 22 feet long and the angle of elevation is 72° . Find the height of the lighthouse.



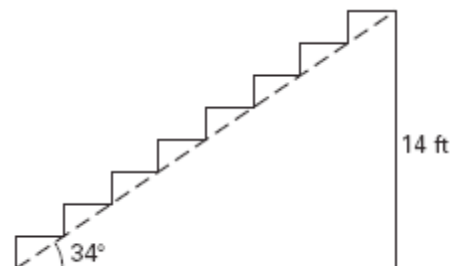
13. At 4 P.M. the angle of elevation of the sun is 40° . Find the length of the shadow cast by the lighthouse.
14. At 6 P.M. will the length of the shadow be longer or shorter than it was at 4 P.M.? Explain.

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Use the escalator pictured to answer the following questions.

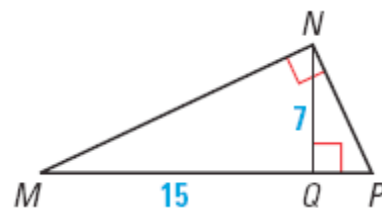
15. A new store is being built. An escalator is planned. It will make an angle of 34° with the floor. If the vertical distance between floors is 14 feet, how long will the escalator be?



16. If the angle made with the floor is changed to 36° , will the length of the escalator increase or decrease? Explain.

Review.

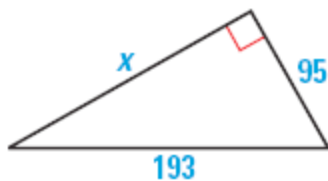
17. Write similarity statements for the three similar triangles in the diagram. Then find QP and NP. Round your answer to the nearest tenth. (Chapter 9 Section 1)



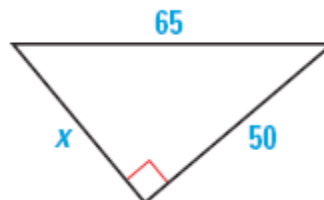
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Find the unknown side length. Simplify answers that are radicals. Tell whether the side lengths form a Pythagorean triple. (Chapter 9 Section 2)

18.



19.



20.

